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Notes and News

A FERN CATALOGUE WHICH IS FERN LITERATURE. A dealer's catalogue which contains names of nearly two thousand species and varieties of ferns with very many illustrations, and which sells for two shillings is really worth a place in a botanical library. H. B. May & Sons, The Nurseries, Upper Edmonton, England, issue such a catalogue. Although it is primarily of interest from the point of view of private fern growers such as are common in England, there are some points of value for American fern students.

Ferns are classified from a horticultural standpoint in three groups: "stove" ferns, which require winter temperature of from 55 to 65 degrees Fahrenheit; "greenhouse" ferns which need from 45 to 55 degrees in winter; and hardy ferns which can stand winter cold out of doors.

In the list of hardy ferns are included several hundred species and varieties. Of course, not all that are hardy in England would be hardy in all parts of the United States, but any one here interested in growing hardy species could add a considerable number to his list. The list of hardy forms includes as might be expected numerous varieties of common species. For example, there are 139 varieties of lady fern, and 109 of hart's-tongue, besides numerous forms of male fern, et al.

Not all the hardy forms are varieties, however. One finds here American forms which the names do not readily identify, as "*Aspidium uliginosum*," "*Lastraea marginalis robusta*," "*Athyrium Michauxii*." It may interest readers to know that *Osmunda regalis*, the European, and *O. spectabilis*, the American form, are kept separate; similarly *Struthiopteris germanica* and *S. pennsylvanica*, and the American and European forms of the *Dryopteris spinulosa* group.

R. C. B.

FALL FRUITING OF THE INTERRUPTED FERN. We have a few plants of interrupted ferns (*Osmunda Claytoniana* L.) in one corner of our yard. Last season they fruited twice.

In looking through my diary, I read: "April 10th: interrupted ferns coming up." They fruited in May. We had a wet season and the plants were in good condition all summer. In September they put up new fronds, both fertile and sterile, not quite as tall as the first set, but well developed fronds.

I have never found the var. *dubia* A. J. Grout. In fact, I have never found the slightest variation in the interrupted fern. In its near relative, the cinnamon fern, we find the form *frondosa*, and plants with the fronds incised are quite common, but with the interrupted fern when we see one we see them all so far as my observation goes.

In the *Fern Bulletin* Vol. XV, No. 1, is an article on the fall fruiting of the cinnamon fern by Prof. Clute. In the southern states it has the habit of fruiting in the fall. This has been noted from a number of states, but not reported from the north.

It would be interesting to hear if any member of the society has noticed the interrupted fern fruiting twice in one year.

H. C. BIGELOW.

Apropos of *Ophioglossum*, the members of the Fern Society may be interested in my observations. I have collected it but once, in a wet place in an old mowing lot on an abandoned farm at 1500 ft. altitude. The place had had no cultivation for 50 years or more, but hay had been cut nearly every season. My specimen was in the bog. I could never find another.

A. J. GROUT.

Although a number of American florists have cultivated the hart's-tongue fern, there has been doubt whether any of their stock was derived from native American plants. We know now that there will soon be one undoubted American strain on the market. At the time of the Society's field meeting last summer, fruiting fronds of the hart's-tongue were sent from Jamesville, N. Y. to A. M. Davenport, Watertown, Mass., and from their spores he now has five or six hundred plants in the prothallial stage or showing the first leaf.

QUERIES AND HINTS FOR THE FERN BOYS AND GIRLS,
by an old-fashioned fern-lover.

What is the rarest world fern? Is it *Asplenium Seelosii*? "The rarest, most circumscribed of any known European fern. Only in the Dolomites of South Tyrol." (Hooker.) Or is it *Aspidium haleakalense*? "Halfway up the volcano, Hawaii. Nowhere else in the world." (Hitchcock.)

What is the rarest New England fern? Is it *Aspidium fragrans*? Who knows it well? Who appreciates it fairly? Who has succeeded in cultivating it? With what food? In what circumstances? What are its relatives? Has any other plant its peculiar perfume? When is that perfume at its best? (I gathered it once when it was *delicious* and it lasted for weeks.) Has any other fern its viscosity? Is it not more like the *Woodsias* than the *Aspidiums*? What are its ancestors?

Who is studying fossil ferns?

J. A. BATES.

A FOSSIL FERN FREAK. In a collection of fossils from Alaska assigned to Dr. Hollick of the New York Botanical Garden for study there was found an impression of a

fern leaf which demonstrates that freak forms occurred in the past as well in modern times. The leaf in question represents a once-pinnate type but shows in some of its pinnae a second grade of division, a variation which is very common in certain forms of *Nephrolepis*, the genus to which the Boston fern belongs.

FERNS AS WEEDS. Farmers' Bulletin number 687 deals with the "Eradication of ferns from pasture lands in the eastern United States." Two of our friends are noted as especially troublesome, viz., *Dennstaedtia punctilobula* and *Pteridium aquilinum*. Three others, *Onoclea sensibilis*, *Dryopteris thelypteris*, and *Osmunda cinnamomea*, are named as sometimes troublesome. *Dennstaedtia* is the most frequent fern weed in eastern states; *Pteridium* in the west. The brake usually occupies clearings in the Adirondacks though the land in this case was probably not being used for any stock.

Two main methods of eradication are urged: first by spraying with salt or other plant poison solution; second by repeated mowing, two or three times being ordinarily enough. Another method suggested is really a combination of these two and consists of sprinkling salt for stock among fern growths. In their eagerness for the salt the cattle would practically destroy the leaf growth of the ferns, but there would be also some loss in salt which the cattle would be unable to get.

RUTH HOLDEN: THE ANATOMY OF A HYBRID EQUISE-TUM.¹

A preliminary note on this subject by the author was mentioned in an earlier number of the FERN JOURNAL.

¹Am. Jour. Bot. 2: 225. May 1915.

In the present paper she presents detailed evidence derived from a study mainly of stem anatomy, both internal and external, that *E. variegatum* var. *Jesupi* is a hybrid between *E. hyemale* var. *affine* and *E. variegatum*. For this conclusion she gives the following reasons: "(1) It has some of the characters of *E. variegatum*, some of those of *E. hyemale*, and some that are intermediate between the two. (2) A large number of its spores are abortive."

The trolley cars and billboards in Queen Elizabeth's time, in place of endorsements of So-and-so's Talcum Powder for the ladies, must have recommended the use of Whozis's Fern Ashes. At least that is the inference to be derived from a passage in Ben Jonson's "The Devil's an Ass," in which fern ashes are named as one of several aids to beauty recommended by no less a person than one of Satan's subordinate devils who was sojourning in human form for a brief period. Cannot some reader of the Journal follow up this reference and determine just what species was used?

Members of the Fern Society, especially those who attended the Syracuse meeting last summer, will be sorry to learn that the tract of about 700 acres about East Green Lake and White Lake near Jamesville, N. Y., which contains some of the best stations for the hart's-tongue and *Botrychium onondagense*, has been sold to a cement company, and that its many features of scientific interest are likely soon to be obliterated. An unsuccessful attempt was made to secure this tract and add it to the State reservation already existing at West Green Lake.